



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,152	01/28/2004	Wilfried Heide	246980US0DIV	2152
22850	7590	05/18/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER	
			EGWIM, KELECHI CHIDI	
		ART UNIT	PAPER NUMBER	
		1713		
		NOTIFICATION DATE	DELIVERY MODE	
		05/18/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

MAILED  
MAY 18 2007  
GROUP 1700

Application Number: 10/765,152  
Filing Date: 01/28/2004  
Appellant(s): HEIDE ET AL.

Stefan U. Koschmieder  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 01/08/2007 appealing from the Office action mailed 09/11/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct.

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because the examiner has withdrawn them: The 103 portions of the 102/103 rejections of claims 15 and 27-29 are withdrawn. The 102 portions of the rejections are maintained.

**(7) Claims Appendix**

A substantially correct copy of appealed claims 10-12 and 15-35 appears on pages (i-v) of the Appendix to the appellant's brief. The minor errors are as follows: The Claims Appendix also contains claims 13, 14 and 36, which are withdrawn and not subject to Appeal.

**(8) Evidence Relied Upon**

4,625,001                            TSUBAKIMOTO ET AL.                    11-1986

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:  
Claims 10-12, 15, 24-29 and 33-35 are rejected under 35 U.S.C. 102(b) as anticipated by Tsubakimoto et al.

In col. 2, lines 7-20, Tsubakimoto et al. teach a continuous process for polymerizing water-soluble unsaturated monomers with 0.0005 to 5 mol% of crosslinking monomers (col. 3, lines 20-24) in aqueous solution in the presence of fed-in nitrogen inert gas (col. 4, lines 30-44) and initiators, wherein water vapor is formed during polymerization and wherein the polymerization temperature is generally around 60 to 100°C (col. 6, lines 48-60). The polymerizations are carried out in mixing kneaders comprising at least two counter-rotating axial parallel screws/shafts with kneading elements (see elements 26 (two), 29 and 30 of Figures 4 and 5), wherein each shaft would function to, at least to some extent, knead and transport polymerization mixture, and the heat is dissipated through evaporation/vaporization and discharged products over the period of the reaction (also see the examples in Tsubakimoto et al.).

Clearly, each of the two shafts "26" and the shafts "29" and "30" are rotating and each have at least two elements on them that would serve to knead/mix and convey the monomer mixture from the upstream end to the downstream end of the apparatus. It is also clear from the description in col. 5, lines 28-58, that there is a conveyance by each of the two elements "26", "30", and particularly "29", from the direction of the reaction inputs "22" and "23", toward the direction of the outlet "32" on the other end of the parallel rotating shafts.

The mixing kneader elements of Tsubakimoto et al. (the two "26's" and "29" and "30" shafts, including any combination of two, such as "26" and "29") continuously convey/transport the reaction mixture downstream, meet the requirements of the claimed "transporting elements for conveying a monomer mixture through a mixing kneader".

Thus, the requirements for rejection under 35 U.S.C. 102(b) are met.

Claims 16-23 and 30-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Tsubakimoto et al

While Tsubakimoto et al. may not expressly measure the percentage of heat loss from evaporation verses the percentage of heat loss from discharged products or the residence time as claimed, it is reasonable that the claimed percentage ratios of heat loss and retention times would be the same as in the presently claimed process since the continuous process, as well as the mixing kneader, of the prior art is essentially the same and the USPTO does not have at its disposal the tools or facilities deemed necessary to make physical determinations of the sort. In any event, an otherwise old

process is not patentable regardless of any new or unexpected properties or measurements. *In re Fitzgerald et al.*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive process because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

#### **(10) Response to Argument**

Regarding Appellant's argument that "Tsubakimoto does not disclose a mixing kneader having at least two axially parallel rotating shafts having a plurality of kneading and transporting elements" or "the use of such a mixing kneader to convey a monomer mixture in an axial direction from an upstream location to a downstream location of the kneader", appellant is directed to col. 5, lines 28-58 and Figures 4 and 5 in Tsubakimoto et al.

Regarding appellants argument that "[t]he shafts identified by reference numeral 26 are explicitly described as 'stirring shafts' and [t]he single shaft identified by reference numeral 29 is identified as a 'discharge screw'", elements "26", while being labeled "stirring shafts", clearly also function to convey the mixture towards the downstream direction and the discharge. Also, element "29", while being labeled "discharge screw", clearly kneads/mixes while conveying/discharging the mixture. Thus, regardless of the primary purposes of these shafts in the apparatus, each of the shafts have a plurality of elements and serve to both knead and transport the mixture in

an axial direction from the upstream location to the downstream location of the kneader. Thus, Tsubakimoto does disclose the mixing kneader having at least two axially parallel rotating shafts having a plurality of kneading and transporting elements.

Regarding claim 24, while Tsubakimoto discloses an embodiments wherein the heat of polymerization reaction is partially removed with a jacket, this embodiment, while "desirable", is not required. It is well settled that anticipatory teachings are not limited to any particular embodiment. *In re Boe*, 148 USPQ 507 (CCPA 1966). Disclosed preferred embodiments do not constitute a teaching away from a broader disclosure. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971).

Regarding Claim 26, Appellant is directed to col. 5, lines 28-58 and Figures 4 and 5, where the elements are taught.

Regarding Claims 33-35, applicant argues that an additional step is required after discharge to remove the residual monomers from the gel of Tsubakimoto et al. However, the present claims do not require that the recited amounts of residual monomer be present at discharge from the apparatus. The claims only require the reduced residual monomers to be present in the gel. Any additional step taken by Tsubakimoto et al. to secure such residual monomer removal from the gel would result in the low residual monomer content in the gel as claimed.

Regarding the 102/103 rejections of claims 16-23, appellant argues that "the Office's assertion [of anticipation or obviousness] in this regard is entirely without foundation" because Appellants "have shown that the prior art kneader and the kneader of the present claims are not the same". The examiner disagrees for reason already

stated above. The prior art apparatus and the kneader apparatus, as presently claimed, as demonstrated above, are in fact the same.

Regarding claims 27-29, these interchangeable blades can be found in figures, 2, 3, and 6.

Regarding claims 30-32, the rotating shafts of Tsubakimoto et al. also have a transporting function. Thus, while Tsubakimoto et al. may not contain a specific example within the claimed retention times, it remains reasonable that the retention times would be the same as in the presently claimed process since the continuous process, as well as the mixing kneaders, of the prior art is essentially the same and the USPTO does not have at its disposal the tools or facilities deemed necessary to make physical determinations of the sort. In any event, an otherwise old process is not patentable regardless of any new or unexpected properties or measurements. *In re Fitzgerald et al.*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02. See *Ex parte Lee*, 31 USPQ 2d 1105 (Bd. Pat. App. & Inter. 1993). See MPEP § 2131.03. Applicant is reminded that the prior art teaching is not limited to any particular example.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive process because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

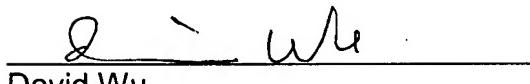
For the above reasons, it is believed that the rejections should be sustained.

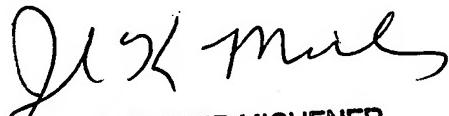
Respectfully submitted,

KCE

KELECHI C. EGWIM PH.D.  
PRIMARY EXAMINER

  
Conferees:

  
David Wu

  
JENNIFER MICHENNER  
QUALITY ASSURANCE SPECIALIST